TCT-619

Prognostic Implications Of Percutaneous Coronary Interventions Performed According To The Appropriate Use Criteria For Coronary Revascularization

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Background: The appropriate use criteria (AUC) for PCI were developed in order to deliver high-quality care; however, the prognostic impact of these criteria remains undefined. We aimed to assess the prognostic implication of the AUC for PCI in a cohort of non-ACS patients.
Methods: Consecutive patients (n=3,819) undergoing PCI at MedStar Washington Hospital Center since the 2009 AUC publication were retrospectively grouped according to AUC as an "appropriate", "inappropriate" or "undetermined" indication for PCI. Outcomes up to 1 year were compared.
Results: PCI was categorized as "appropriate" in 39%, "inappropriate" in 3.5% and as "undetermined" in 57.5% of the patients. "Appropriate" PCI patients had a higher prevalence of risk factors for CAD. "Inappropriate" PCI involved the treatment of more complicated lesions, with lower rates of drug-eluting stent utilization. While there were no differences in procedural complications among the 3 groups, the in-hospital outcome was worse for "inappropriate" PCI patients. The 30-day and 1-year major adverse cardiac event rates of the "appropriate", "inappropriate" and "undetermined" PCI patients, respectively, were comparable.(Table) In multivariable analysis, the procedural appropriateness was not associated either with in-hospital or 1-year with outcome.
Conclusions: In general, physicians practicing in tertiary centers adhere to the AUC when subjecting patients with non ACS to revascularization. The utility of the AUC to determine long-term outcome should be challenged, and until demonstrated in prospective clinical trials should remain a recommendation only.

Table

	Appropriate (n=1494)	Inappropriate (n=134)	Undetermined (n=2191)	p value
Dissection	0.3%	0%	0.3%	0.75
No reflow	0.1%	0%	0.2%	0.77
In-hospital				
Major complication	1.9%	6%	2%	0.007
Mortality	1.3%	4.5%	1.6%	0.02
30-day				
Mortality	2.2%	6.6%	2.9%	0.05
MACE	3.2%	5.5%	3.7%	0.51
1-year				
Mortality	7%	11.6%	9.5%	0.12
MACE	13.1%	11.6%	15%	0.43

TCT-620

What Is The Optimal Revascularization Strategy For Percutaneous Coronary Intervention Of Distal Anastomotic Lesions After Coronary Bypass Surgery?

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Background: Distal anastomotic lesions are the most common reason for venous graft failure, especially early after bypass surgery. However, the best percutaneous method for treating these lesions is still controversial.
Methods: All patients who underwent percutaneous coronary intervention (PCI) either with balloon angioplasty alone, bare-metal stent or drug-eluting stent of distal anastomotic lesions of the bypass grafts were retrospectively enrolled.Baseline clinical and angiographic characteristics were compared, as were procedural success and clinical outcomes at 1 year.
Results: Among the 135 lesions included in the analysis, 27 (20%) were treated with plain old balloon angioplasty (POBA), 63 (46.7%) with a bare metal stent (BMS), and 45 (33.3%) with a drug-eluting stent (DES). The baseline characteristics were generally comparable among the 3 groups except for more peripheral vascular disease in the BMS group than in the POBA and DES groups (42.2% vs. 26.9% vs. 15.9%, respectively; p=0.013). More patients were admitted with acute myocardial infarction in the POBA group than in the BMS and DES groups (26.9% vs. 9% vs. 24.4%, respectively; p=0.038). At 6 months' follow-up, the highest rate of TLR-MACE was seen in the BMS group as compared with the DES and POBA groups (16.2% vs. 2.2% vs. 3.8%, respectively; p=0.03).

Variable	BMS (n=63)	DES (n=45)	POBA (n=27)	p Value
Clinical Success	(95.6%)	(97.8%)	(92.3%)	0.056
6 months follow-up				
TLR MACE	11 (16.2%)	1 (2.2%)	1 (3.8%)	0.030
TVR MACE	12 (17.6%)	3 (6.7%)	3 (11.5%)	0.276
Death	8 (10.8%)	1 (2.1%)	0 (0.0%)	0.061
TLR	2 (2.9%)	1 (2.1%)	1 (3.0%)	1.000
TVR	2 (2.9%)	2 (4.3%)	1(3.0%)	1.000
QWMI	0 (0.0%)	0 (0.0%)	0 (0.0%)	0
NQWMI	1 (1.4%)	2 (4.3%)	0 (0.0%)	0.453
ST	1 (1.4%)	1 (2.1%)	0 (0.0%)	1.000
1 year follow-up				
TLR MACE	14 (20.6%)	5 (11.1%)	3 (11.1%)	0.195
TVR MACE	16 (23.5%)	8 (17.8%)	5 (18.5%)	0.604
Death	9 (13.2%)	2 (4.4%)	0 (0.0%)	0.077
TLR	4 (4.8%)	3 (6.7%)	1 (3.7%)	0.738
TVR	3 (4.8%)	4(8.9%)	1 (3.7%)	0.848
QWMI	0 (0.0%)	2 (4.4%)	0 (0.0%)	0.148
NQWMI	2 (3.2%)	2 (4.4%)	1 (3.8%)	1.000
ST	1 (1.5%)	1 (2.2%)	0 (0.0%)	1.000

TVR= target vessel revascularization; MACE= major adverse cardiovascular event; TLR= target lesion revascularization; QWMI= Q-wave myocardial infarction; NQWMI= non Q-wave myocardial infarction; ST= stent thrombosis.

Conclusions: Percutaneous revascularization of the saphenous vein graft distal anastomosis site by DES implantation can be performed with a high procedural success and favorable long-term outcomes. However, POBA is an alternative for patients who cannot tolerate prolonged dual antiplatelet therapy.

TCT-621

Drug-Eluting Stent Event Registry of Thrombosis (DESERT): The International Drug-Eluting Stent Thrombosis Registry, Angiographic Assessment

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Background: Stent thrombosis (ST) frequently presents as an acute event triggering myocardial infarction (MI) or death. Given the low ST event rates, single-center studies are limited when evaluating this phenomenon. It is important to understand the factors predicting ST and to define which patients are at high risk. This registry aims to evaluate predictors and outcome of late drug-eluting stent (DES) ST.
Methods: 982 patients, 491 case-control pairs, from 21 sites from the USA, Canada and Switzerland were enrolled into this multi-center, observational, case-control study of definite, late, or very late ST in patients with DES. Cases are identified by presentation with definite ST (ARC definition). Controls were matched according to three criteria: same enrolling institute, date of initial DES implant, and no known history of ST. Off-line quantitative coronary angiography (QCA) analysis was performed on the thrombotic lesion and the control lesions for a subset of 378 case-control pairs.
Results: The average time from DES implant to ST was 897.68 ± 652.82 days. The average lesion length was significantly longer for the ST patients compared to control. There were more LCX and bypass graft lesions and thrombus upon DES implant in the ST group. The stented segment length and residual stenosis were higher following DES implant in the ST group. Half of the overall lesions received sirolimus-eluting- (50.2%), paclitaxel-eluting- in 40.3%, everolimus-eluting- in 7%, and zotarolimus-eluting stents in 1.8%. There was no difference between the matched groups with respect to stent distribution. Preliminary univariable analysis is described in the Table.
Conclusions: These preliminary angiographic characteristics suggest that thrombus presence and TIMI 0 at presentation, and longer lesion and stented segment with high residual diameter stenosis post-DES are strong correlates for late ST.

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